THE PACIFIC RAILWAY DEBTS.

I.

THE disposition to be made of the Pacific Railway debts is a question of the day. It is so because in 1895 there falls due the first installment of an indebtedness to the United States Government of nearly $125,000,000, and before this first installment is due, the policy of the Government concerning the whole problem presented by the Pacific Railways must be definitively fixed. The answer to the question in hand ought to depend on the following considerations: What were the spirit and the motives of the Government in making this loan? Has justice been done subsequently upon the terms fixed in the chartering legislation between the roads and the Government? What is the present financial status of the roads — their debt-paying ability? The last is purely a business consideration the others might affect the animus of the legislation which is soon to be enacted. The treatment of these points in this article can be only in outline: detailed proofs must be presented in another form.

The Pacific Railway project as it finally took form was an evolution, with its beginnings far in the past. Within three years of the time when Stephenson constructed the first successful locomotive, there was printed in America a proposal to connect our Atlantic and Pacific seaboards by a railway. Nor was this a sporadic case, for by 1836 there was held a public meeting to advocate the Pacific Railway, and by the end of the decade the idea was far from new. During the forties the agitation was widespread and vigorous, and half the states in the Union, by votes of their legislatures, formally approved the plan. From

1850 to the enactment of the charter acts, the Pacific Railway was discussed in every session of Congress. In 1856 the Republicans, and in 1860 both the Republicans and the Democrats, commended the project in their platforms. Thus the demand for a road had spread.

Down to this time the convincing arguments in favor of the road had been first commercial, and only secondarily political. The claims of rival sections and cities, however, put off definite action, until in the later fifties the slavery question threw everything else into the background.

The earliest Pacific Railway plan was for one road, to run from the shore of Lake Michigan to Puget Sound. Later, as the regions farther south began to claim for themselves the advantages of the road, there were evolved multiple road schemes, and routes all the way from Wisconsin to Texas, and from Puget Sound to San Diego bay, were talked of. Still later it was realized that the task of building a single road was one of sufficient magnitude, without attempting the simultaneous construction of two or three. Finally, the political significance of the road came into prominence. The suspicion that England wished to wrest from us the Pacific coast, was an argument against building on the northern route, which ran close to the British possessions; then the outbreak of the war killed the southern road projects, and there remained the central route as the only available one. Thus matters stood at the outbreak of the war.

In the debates in Congress there had appeared all sorts of arguments favoring and opposing the road. It was talked of as a monstrous extravagance, and as a means of filling the coffers of the Government. All the strict-construction ideas were presented with numberless variations. It was said that the general Government could not charter a road at all, that a road so chartered could run its line only through the territories, that it could run anywhere. The scheme was praised as a means of saving the nation, and denounced as a blow at the South. Finally, with secession, the southern members withdrew, and the opposition, which had

come largely from the uncommercial South, died down. It was evident that the northern and Republican Congress could now proceed with the project which had so long been under consideration. From this point on the debate was chiefly on details, not on the principles underlying the right to charter. Without further introduction, then, we may pass to a consideration of the Act which, by President Lincoln's signature, became a law July 1, 1862. It was the result of a constant Congressional struggle for a dozen years, and might be expected to fit the needs of the case perfectly.

II.

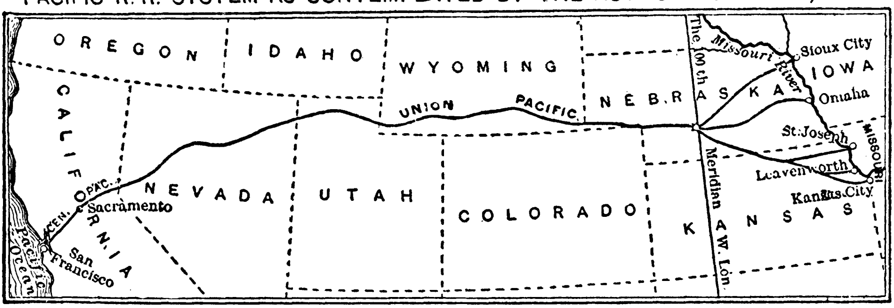
The Pacific Railway Act of 1862 had for its object the building of a road which should connect the eastern railway net with the one which had already begun to come into existence on the Pacific coast. This road was not, however, to begin where the roads from the east then ended. Across Iowa private initiative could be trusted to supply the lack, so the initial point of the Pacific Railway was located on the Missouri river, at Omaha. This city had no rail communication with the East until 1867, when the Chicago and Northwestern came through to that point. The Pacific Railway Act provided for a road to run from Omaha to San Francisco. The eastern portion of this trunk line, from Omaha to the state line of California, was to be built by the Union Pacific Railroad Company. This company was to be organized *de novo* for this purpose, the first corporation since the Second United States Bank to receive its charter from the National Government.

The western part of the main trunk, from the eastern line of California to San Francisco, was to be built by the Central Pacific Railroad Company, a California corporation.

Besides this main line, the act provided for other branch lines. Each of the various cities on the Missouri river wanted the valuable privilege of being the eastern terminus of the system, and to quiet their demands, a system of branches was devised. Sioux City, on the north, was provided for in this way: When that

point had been reached by a railway running through Iowa or Minnesota—*i. e.*, from Chicago or St. Paul—the Union Pacific Company was required to construct a branch connecting Sioux City with the main line at a point not west of the one hundredth meridian. From Kansas City, the Leavenworth, Pawnee, and Western was to build an extension to the north and west, joining the main line, like the Sioux City branch, at a point not west of the one hundredth meridian. This company was also authorized to build a short line from Leavenworth to connect that city with the Kansas City branch. St. Joseph was to be the initial point

PACIFIC R. R. SYSTEM AS CONTEMPLATED BY THE ACT OF JULY 1ST, 1862.



of a line by way of Atchison running westward. It was expected that one hundred miles of track would suffice to effect a junction with the Kansas City branch. Thus there would be a symmetrical system of branches to collect the traffic of the Missouri river points and concentrate it at the one hundredth meridian for its trip westward. The Pacific Railway as contemplated in the Act of 1862 is shown in the accompanying map.

To insure the building of these roads a Government subsidy was offered in the shape of a land grant and a loan of the credit of the United States. This, however, did not apply to the short line from Leavenworth. On each side of the track the railway company was to receive five sections of land, the alternate ones—*i. e.*, one-half the land in a strip twenty miles wide. This would make the total grant of land about 33,000,000 acres.

But this land grant could not be made a source of immediate income, for sales must wait on settlement, and settlers would come in but slowly until the railway was built. The credit loan was the device for providing ready money. This aid was given in the following manner: When short sections, of specified lengths, had been completed, the Secretary of the Treasury was authorized to turn over to the railway officials bonds of the United States which could be sold. For those portions of the road which ran through level country—*i. e.*, east of the Rocky Mountains and west of the Sierra Nevadas—there were to be given for every mile of road sixteen currency bonds of the United States of the denomination of $1,000, to run thirty years, with interest at 6 per cent. For the 150 miles where the road, leaving the plains, climbed across the Rockies to reach the interior plateau, the bond subsidy was to be trebled—$48,000 per mile. The provision was the same for the 150 miles eastward from the western base of the Sierra Nevadas. For the plateau region between the Rockies and the Sierra Nevadas the subsidy was to be $32,000 per mile. Thus the total issue of United States bonds for the purpose of securing the construction of the Pacific Railway was, in round numbers, $61,000,000. But these bonds were not a gift to the railway companies; they were a loan to be repaid at maturity, principal and interest, and they were constituted a first mortgage on the roads which they were issued to aid in building. Such was the offer which Congress, in 1862, saw fit to make for a railway to the Pacific.

As has already been said, the reasons urged for building a Pacific Railway were at first commercial. These were strong enough to induce vigorous agitation very early, long before the Oregon question had been settled. When the acquisition of California and the southwestern states more than doubled our Pacific coast line, these reasons acquired an added force. With the discovery of gold in California, and the consequent heavy emigration from the eastern states to the Coast, new strength was added to the demand for a road. When the war broke out there was danger that the large southern element in California would gain control

and throw the influence of the Coast in favor of the South, and the road was called for to counteract this danger. In addition to this menace from within there was as great a one from without. There was good evidence that if the strained relations between England and the United States ended in open rupture, England stood ready to make an immediate descent upon the isolated coast. These last were the controlling reasons in 1862. Added to these amply sufficient reasons for subsidizing the railway were still others. The strip, 2,000 miles broad, of unsettled land lying between the eastern and the western populated regions, was believed to be what its name indicated, the Great American Desert, and it was not supposed that a railway across it could ever build up a paying local business. The Pacific Railway, then, it was argued, must rely on trans-continental traffic for its income. In addition to the value of such a road as a bond between the East and the West, and as a commercial enterprise, was its value in helping to settle the vexing Indian problem. The regions through which it would run were the breeding ground of almost interminable Indian wars, and the expense for transporting troops and munitions was very great. This road, it was argued, would make possible the rapid transference from place to place of troops, and decrease the size of the Indian-fighting army. It was calculated that the saving on army bills would equal the interest in the debt to be contracted in subsidizing the Pacific Railways. These, then, were the reasons for the enactment of the Act of 1862. It was a war measure, put through as such when the nation was in imminent danger of disruption, and as such it should be judged.

It was not long after the passage of the Act of 1862 that work under it began. The Central Pacific Railroad Company, to which the building of the western end of the line was assigned, had been organized, in 1861, under California state law. On the 7th of October, 1862, it formally accepted the terms offered by Congress, and the work of construction began January 8, 1863.

The Union Pacific Railroad Company, which was to build the eastern part of the line, effected its temporary organization

according to the terms of the Act, and books for stock-subscriptions were opened in the leading cities of the country. Thirty-one shares of $1,000 each were subscribed for, and $17,300 paid in. There the matter stopped. Railway men knew that a mile of road in Illinois cost $33,000; in Iowa, $35,000; in the level parts of California, $34,000. A considerable proportion of the able-bodied men of the country was in the army, and the prices of both labor and materials were abnormally high. Between the eastern system of railways and the initial point of the proposed road was a gap of hundreds of miles, making it necessary to carry materials by way of the Missouri river, a hazardous and costly mode of transportation. Under the circumstances, the capitalists of the country did not consider the Union Pacific a promising investment.

Meanwhile, Thomas C. Durant of New York, a man of wide experience in railway building and of large resources, became interested in the enterprise, and took hold of it with characteristic vigor. He not only made a stock-subscription of his own, but also secured subscriptions among his friends. To do this, he advanced for them the 10 per cent. required by law to be paid in before the permanent organization could be effected, and agreed to find persons to take it off their hands in case they wished to withdraw from the venture. On the 29th of October, 1863, 2,177 shares of $1,000 each had been subscribed for and a board of thirty directors was chosen. In the list we find a number of names prominent in financial circles, the New York element predominating.

Immediately after organization was effected men were put to work, ground being broken at Omaha, December 2, 1863. The sum of $218,000 which had been paid in on stock-subscriptions was used up, and debts contracted for from $200,000 to $300,000 more. The company was so hard pressed on these debts that it finally resorted to the expedient of selling part of the materials and cars to raise funds. It soon became evident that New York capitalists were not to be induced to put the enterprise through on the terms offered by the Act of 1862.

Finally, construction having ceased and it being evident that the road would not be built unless more liberal terms were extended to capitalists, the Act of July 2, 1864, was made a law. This doubled the land-grant, and allowed the issue of first mortgage bonds equal in amount and similar in tenor to the United States bonds promised in the original Act. Thus the lien of the Government became a second mortgage. In addition to these more important changes, which doubled the resources of the road, several minor ones helped to put the road on a more favorable footing.

Even then the friends of Durant were so doubtful of the success of the road that they availed themselves of the offer made them when they subscribed, and Durant was made responsible for three-fourths of the sum ($2,000,000) required to be subscribed before organization was authorized.

During 1863 and 1864, and well into 1865, Durant was the moving force of the Union Pacific enterprise. He made a dummy contract, in 1864, with an employee of the road named Hoxie, for the building of 100 miles of road at $50,000 per mile. Later this contract was extended to the hundredth meridian—247.45 miles west of Omaha. Still later in the year it was assigned to Durant and a number of his friends, who pledged $1,600,000 for carrying it out. According to the terms of the agreement one-fourth of the sums subscribed was paid in, $400,000 in all, and this amount was used on the road. The men who had assumed the Hoxie contract now stood in the relation of partners, liable not only for the sums subscribed, but to the extent of their fortunes. Some of them became fearful and concluded that it would be better to lose the sums already sunk in the enterprise than to go on and take greater risks. They therefore failed to respond to the call for the second installment of their subscriptions.

About this time, August 1865, an important step was taken in getting the brothers, Oakes and Oliver Ames, to take hold of the project. Oakes Ames had become interested in the Pacific Railway while a member of the Committee on Railroads

in the House of Representatives, and his personal influence in Massachusetts, together with his great financial strength, made him a valuable ally of those who had started the road. Plans for proceeding were again discussed, and it was agreed that the only feasible way to enlist the necessary capital was to organize a construction company. The scheme of building railways by construction companies organized among the stockholders was not new; it had been tried successfully in Iowa. Exhaustive contracts were not a new device. So all that the Union Pacific people had to do, was to adapt to their own use methods which others had elaborated.

It having been decided to make use of a construction company, choice was made of a Pennsylvania corporation as meeting the requirements. This was the Pennsylvania Fiscal Agency, which had been chartered in 1859 to build railways in the South. March 2, 1864, Durant opened negotiations for the purchase of its charter rights, and on the following day the bargain was closed, Durant paying to its original subscribers the sums which they had invested, they assigning their stock. Previous to this time there had been no connection between the men of the Union Pacific and of the Fiscal Agency. On March 26, 1864, an amendatory Act changed the name from the Pennsylvania Fiscal Agency to the Credit Mobilier of America, and as such it later became widely known. Thus the Credit Mobilier became an adjunct of the Union Pacific.

The reason for securing such a company is obvious. No firm could be induced to undertake the building of the road if each member was liable to the extent of his property. The risk was too great. But it was believed that if a company was secured in which the liability was limited to the amount of the subscription to stock, as in the Credit Mobilier, capital could be enlisted. This proved to be the case, and the necessary capital was quickly subscribed.

As a matter of convenience the offices of the Credit Mobilier were to be in New York, where the headquarters of the railway were located, but by its charter it could not cease to be a

Pennsylvania corporation. To get around this difficulty, the device of a New York branch was resorted to. The corporate existence of the Credit Mobilier was maintained in Pennsylvania, the board of directors, the officers, and the executive committee being elected at meetings held in Philadelphia. This executive committee then chose from among the stockholders of the Credit Mobilier and of the Union Pacific, a number of men to constitute what they called a railway bureau. This body had its office in a room adjoining the offices of the Union Pacific. The executive committee attended to all the larger fiscal transactions, while the railway bureau had charge of the construction of the road, payments for work, and other details. Under this arrangement the work progressed satisfactorily. Part of the necessary capital of the Credit Mobilier was secured by transferring to its books the subscriptions which had been made for carrying out the Hoxie contract by the men who assumed it. They were relieved of their former obligations by the transfer of the Hoxie contract to the corporation of which they had just become stockholders. This change was made March 15, 1865, some six months after they had taken the contract off Hoxie's hands. The transferred subscriptions, $1,600,000, were supplemented by others, securing for the Credit Mobilier a working capital of upwards of $2,000,000, and the work, which otherwise must have stopped within sixty days, was pushed vigorously.

But note how incongruous was this arrangement. The Credit Mobilier was nominally a Pennsylvania corporation, while at the Pennsylvania office no business was done. The New York concern was in form only a branch of the Pennsylvania corporation, yet it transacted all the business which the Credit Mobilier ever had. The Union Pacific railroad was being built, not by the Union Pacific company, but by the Credit Mobilier, and the Union Pacific officers simply got the resources into available shape and turned them over to the Credit Mobilier. It sold the United States bonds and transferred the cash. Sometimes it turned over the proceeds of the sale of first mortgage bonds, sometimes the bonds themselves.

Under the new impulse which the Credit Mobilier gave to the enterprise, the work was carried forward so rapidly that during the year 1866 the Government passed upon and accepted 270 miles of track as meeting the requirements of the law. About the time when the construction had reached the one hundredth meridian, quite a number of the stockholders of the Credit Mobilier had become large stockholders of the Union Pacific, among them Mr. Ames, Mr. Dillon, and Mr. Duff. Naturally, they desired to be represented on the Union Pacific board, and Oliver Ames and two or three others, at the election of October 3, 1866, went into the directory of the Union Pacific. From this time on there were two factions among the Union Pacific people, one headed by Durant, the other by Oakes Ames. It has repeatedly been said that the struggle between Durant and Ames was due to their different views as to the Union Pacific enterprise and their different motives in taking it up. Durant is said to have believed that the road would be a commercial failure, and that the only money to be made out of it was to be made on construction contracts; while Ames believed in the future of the road and looked to the legitimate business of the road after its completion for his profit. The evidence as to contracts made by these men for construction, however, does not exhibit any great rapacity on Durant's part, nor any great tenderness toward the road on Ames's part. It seems that the friction between these men was rather of a personal nature. Durant carried the enterprise as far as his resources would allow, and then had to give way to Ames. Whoever had succeeded him as leader would probably have aroused Durant's jealousy and had his opposition to contend with. A long struggle ensued, the details of which may be omitted. They show nothing but the evolution of the terms of the great contract under which two-thirds of the road was built, the Ames contract.

Before noting the terms of the Ames contract let us recapitulate. The first thirty-five miles of track had been built by the Union Pacific Company directly, largely with Durant's money. Next, the Hoxie contract for 100 miles was let, and later extended

to cover all the road from Omaha to the one hundredth meridian —247.45 miles—including the part already built. Then the Hoxie contract was assigned to the Credit Mobilier and by it executed. Beyond the one hundredth meridian all contracts were let subject to any future contract which might be made covering the same ground, and the Credit Mobilier carried construction to the three hundred and fifth milestone. Then followed a series of attempts at contract letting which ended in nothing, because of the differences of policy between Durant and Ames.

Thus far construction had been easy. It had been anticipated that great difficulty and heavy expenses would be met in crossing the Rocky Mountains, but during 1867 it became generally known that there was an easy route by way of the Black Hills requiring no grade heavier than ninety feet to the mile, and knowledge of this fact greatly strengthened confidence in the completion of the road. This route lay through what had previously been called the Cheyenne Pass, Cheyenne and Sherman being located there. From this time on it was called the Evans Pass, it having been discovered by an engineer named Evans acting under the guidance of the chief engineer of the road, General Dodge.

By August 16, 1867, the road was completed to a point 188 miles beyond the one-hundredth meridian, and a letter of that date from Oakes Ames proposed the terms on which he would become responsible for building the 667 miles of road beginning at the one-hundredth meridian. The board passed a resolution the same day directing the officers to obtain the written consent of the stockholders, a provision upon which Durant insisted, and then to ratify the contract, giving Ames an option of extending it westward to Salt Lake if he chose. The prices specified were: 100 miles at $42,000 per mile, 167 at $45,000, 100 at $96,000, 100 at $80,000, 100 at $90,000, 100 at $96,000. Thus Ames assumed a contract aggregating $47,915,000.

These prices, although high for the eastern sections of the part which they covered, were, on the whole, perhaps not exorbitant.

The rates for the western sections would undoubtedly have been made considerably higher if the eastern part, with its assured profit, had not been included. Moreover, this contract insured the building of the difficult portions by providing that when the proceeds of the bonds were not sufficient to pay the contract prices, the contractor would subscribe for enough stock to furnish the money for paying the balance. In other words, Ames was bound to take in stock, at par, that part of his pay which was not produced by selling the two kinds of bonds. In no other way could security have been obtained for the building of the difficult and risky portions of the road. In fact, it was impossible to let contracts to outsiders for even the easy portions of the road. John Duff, who had done a great deal of work of this sort, made repeated efforts to let contracts among experienced and competent contractors, appealing to his own sub-contractors in his attempts to find some one who would do the work, but he was unable to get anyone to go out there. Horace Clarke said, in 1873, that he thought the Ames contract the wildest contract he ever knew to be made by a civilized man. Be that as it may, the work was pushed to completion under it.

Athough this contract did not intimate in its terms that anyone besides Oakes Ames and the Union Pacific Railroad Company was in any way concerned in the matter, there undoubtedly existed a more or less definite understanding that the persons to profit thereby were the stockholders of the Credit Mobilier. The arrangement by which the profits were distributed to them is described in the tripartite agreement, which was signed October 15, 1867. General Benjamin F. Butler suggested this form of contract as obviating the difficulty which would arise if any single stockholder of the Credit Mobilier should object to the transfer of responsibility to that organization. The party of the first part was Oakes Ames, who then held the contract, and who assigned it to the party of the second part. Seven trustees constituted the party of the second part, and they bound themselves to carry out the contract according to its terms, and to distribute

the profits thereupon among those stockholders of the Credit Mobilier who should execute to them an irrevocable proxy on at least six-tenths of any Union Pacific stock which they then owned, or which they in future might own. This power to vote a majority of the Union Pacific stock insured the trustees against the election of a Union Pacific board hostile to the interests of the Credit Mobilier. The men named as trustees were Oliver Ames, T. C. Durant, J. B. Alley, Sidney Dillon, C. S. Bushnell, H. S. McComb, and Benjamin E. Bates. The party of the third part was the Credit Mobilier, which guaranteed the carrying out of the contract and bound itself to loan the trustees what funds they needed, receiving therefor 7 per cent. interest and 2½ per cent. commission.

Noteworthy changes in the standing of the Union Pacific enterprise had taken place since 1864. Then the Credit Mobilier had to be secured in order to limit liability and get enough capital to continue construction. In 1868 there was no difficulty in getting capital to take hold of the Ames contract. The proxies which were required, and which were readily given to the trustees, were so worded that they made each stockholder of the Credit Mobilier a partner in the enterprise—just what the Credit Mobilier had been made use of to avoid—and the trustees went to work with $50,000,000 back of them. Until the connection of the Credit Mobilier with the Ames contract was known, the stock of that corporation had never had a market value. Then it immediately went far above par, and what few sales were made were at fancy figures like 260.

As has already been said, the Credit Mobilier continued to build the road beyond the one-hundredth meridian, where its contract ceased, knowing that proper credit for its work would be given when the final contract was let. We have seen that when Ames's proposal was made, 188 miles had already been built. By the time he assigned the contract to the trustees 50 miles more had been finished. This first part of the work embraced under the Ames contract was not expensive, and what was to be paid for it was some $2,500,000 or $3,000,000 in excess of its cost to the

builder. So the trustees, with this sum in hand, made haste to carry out their obligations.

As Ames did not wish to extend his contract beyond the 667 miles which it originally covered, Durant, to avoid delay, made a contract in November, 1868, with James W. Davis, a sub-contractor, to build the remainder of the road. The Davis contract took the Ames contract as its basis, and an accompanying agreement provided for its assignment to the same trustees who executed the Ames contract. A resolution of the board of directors of the Union Pacific approved Durant's action, and a committee was appointed to obtain the necessary consent of the Union Pacific stockholders. Thus without any change of machinery the work went on.

Construction on the western part of the road was pushed with unprecedented vigor, winter not being allowed to stop work. There were several reasons for this haste. Public opinion, which the Government directors voiced, urged it. To put capital into the road and postpone its productiveness by not opening it to traffic until 1875, the limit set by the Act of 1864, would have crushed the company under the accumulations of interest. The Salt Lake business and a "governing point" for the traffic of that region was a prize to be gained only by rapid work. Late in the construction period the desire to meet the Central Pacific as far west as possible became a motive. So the work was done with marvelous speed. Four or five miles of track were laid per day, and items of expense which should have been $600 per mile were made $1,500 instead. By such methods the Union Pacific and the Central Pacific were joined May 10, 1869.

This saving of six years of the time allowed by the law for completing the road doubled the cost to the builders. By increasing the working force the chance of accidental delays was increased, and the costliness of such delays likewise increased. Just before the Ames contract was let, the Union Pacific was obliged to borrow money in New York to use on the road, for which it paid 18 or 19 per cent. By pushing the road out beyond the bounds of civilization and not waiting for the slower pace of

the settler, it often became necessary for one-half the force to stand guard while the other half worked. Hundreds of workmen were killed by the Indians.

Thus far the managers of the enterprise were responsible for the increased cost; they could have avoided it by adopting a different policy. But there were other items of needless cost which they could not avoid. For these the Government alone was to blame. One such is where two Government directors insisted that a cut should be made through each rising in the Laramie plains, giving the track a dead level, instead of conforming it to the surface of the ground. As snow blockades made it necessary to refill these cuts later, there was a waste of from $5,000,000 to $10,000,000. At the crossing of the North Platte machine shops were called for, which cost perhaps $300,000. To the company they were not worth three cents. A Government commissioner, Cornelius Wendell, appointed to examine the road and report whether or not it met the requirements of the law, flatly demanded $25,000 before he would proceed to perform his duty. As a considerable section of road awaited acceptance, and as acceptance must precede the drawing of subsidies, his demand was paid in the same spirit in which it was made—as just so much blood-money.

III.

In this sketch of the construction period of the Union Pacific there have appeared all the characteristics which mark the building of the other parts of the system. Each of the Pacific Railways was built by a ring of stockholders organized into a construction company; all the resources of the railway company were turned over to the construction company; each road was capitalized far beyond what was necessary, and thus crippled by its burden of interest on securities.

Better management was shown in building the Central Pacific than in building any other part of the system. A small circle of Sacramento merchants took up this work which other capitalists shunned, risked all they had in it, and reaped rich rewards for so

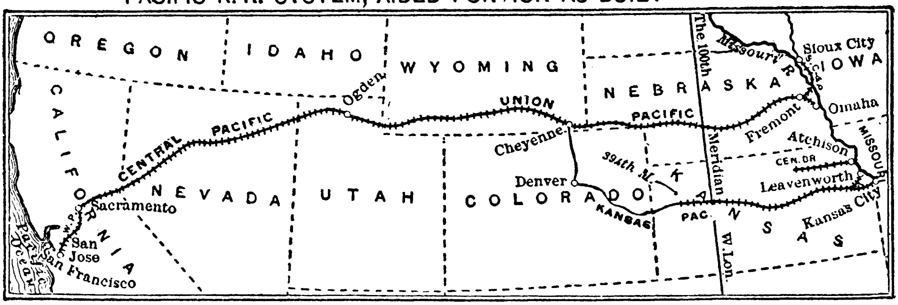
doing. Their construction company was called the Contract and Finance Company. Its task was completed in the face of far greater physical odds than those against which the Union Pacific fought. Engines, rails, tools, etc., were taken from New York to California by the long voyage around Cape Horn—sailing 19,000 miles to reach a point 3,300 miles distant. Long stretches of snow-sheds were built of logs, and heavy grades were overcome in crossing the Sierras; and the Central Pacific emerged on the interior plateau in time to enter an exciting race with the Union Pacific for the traffic of the Salt Lake valley. The junction of the two roads, which it was expected would be at the eastern line of California, but which was left movable so as to incite to rapid building, was thus pushed eastward almost to Ogden.

The main trunk of the Pacific Railway system was built according to the plan of the charter acts, except as to the point of junction. Not so, however, as to the other parts. The Sioux City branch, instead of immediately crossing the Missouri and heading for the one hundredth meridian, swung slightly east of south in order to get its subsidy in the fertile Iowa lands, crossed the river not far above Omaha, and joined the Union Pacific at Fremont, a town a little way west of Omaha. This line, known as the Sioux City and Pacific, has never been a part of the Union Pacific system, and is now leased by the Chicago and Northwestern Railroad.

A more important variation from the original plan was made by the branch which it was intended should run from Kansas City to a junction with the main line at the one hundredth meridian. This road had various names at different times, but we may call it by its final title, the Kansas Pacific. The Kansas Pacific Company secured the passage, in 1866, of an act allowing their line to run west instead of north-west, abandoning the junction at the one hundredth meridian. The intention was undoubtedly to proceed to Denver, and thence through New Mexico and Arizona to some point in southern California, as, perhaps, San Diego. This would have made the road a competicor, instead of a branch, of the Union Pacific. The execution of

this plan was frustrated by the unwelcome insertion, in the Act of 1866, of a provision that junction with the Union Pacific must be effected at a point not more than fifty miles west of the meridian of Denver. Congress also allowed the Kansas Pacific company to turn over to an independent organization the building of the link between Denver and the Union Pacific. Thus arose a new company, the Denver Pacific, whose line runs from Denver to Cheyenne. While allowing the abandonment of the

PACIFIC R. R. SYSTEM, AIDED PORTION AS BUILT



old plan, Congress provided that no more bonds should issue to the Kansas Pacific than as if it had followed the original route. The distance from Kansas City to the point where the Union Pacific crosses the one hundredth meridian was determined to be $393\frac{15}{16}$ miles, and the bond subsidy covers only so much of the line. This is important because the lien of the Government lies on only the bond-aided portions of the system. The land grant, however, extends from Kansas City to Cheyenne.

The line which ran from St. Joseph through Atchison to the west, known as the Central Branch Union Pacific, was to connect with the Kansas Pacific. This was prevented by the change in the latter road's route, and the Central Branch found itself a spur running from the Missouri river to nowhere in particular. Failing to receive remedial legislation from Congress, it gave up its plans for becoming a part of the Union Pacific system, and is now leased by the Missouri Pacific. It is, however, owned by the Union Pacific company.

Thus, when the construction period ended, the Pacific Railway system had assumed a form quite different from that planned in 1862. Map I. (p. 427) shows the original plan. The result is shown in Map II. (p. 441).

IV.

As steps toward answering the question, What did the building of the Union Pacific yield as profit? the capitalization and the cost must be considered.

The property, at the close of the period of construction, stood burdened with four kinds of bonds—United States bonds, its own first mortgage bonds, land-grant bonds, and income bonds. Of the Government bonds there were issued the full quota—$27,266,512 on 1,038.68 miles of road. The aggregate of first-mortgage bonds was slightly less than this sum, $27,213,000. Of land-grant bonds there were outstanding $10,400,000, and of income bonds, $9,355,000. Thus the total indebtedness represented by the four kinds of bonds was $74,204,512.

The stock of the road subscribed for when organization was effected was slightly in excess of the $2,000,000 required, and was owned in various quarters. As early as December 1, 1864, the Credit Mobilier began to buy in these shares, and succeeded in acquiring almost all of them. By the time the Ames contract was let, the $2,000,000 had increased to about $5,000,000. Under the Ames and Davis contracts the trustees subscribed, at various times as the work proceeded, according to the terms of those contracts, for $30,096,000 of stock, and when the road was done the stock issued was $36,762,300. Thus the total capitalization of the road was $110,966,812.

But this sum does not represent the cost of the road. From the books of the Union Pacific and of the Credit Mobilier, it appears that the expenditures by the Union Pacific, directly, amounted to $9,746,683.33; and that the actual expenditures under the Hoxie, Ames, and Davis contracts were $50,720,957.94, making the total cost of the road $60,467,641.27.

This should be compared with the sum received for bonds, which is shown by the following table:

First-mortgage bonds	$27,213,000.00	
Loss on same	3,494,991.23	
		$23,718,008.77
Land-grant bonds	10,400,000.00	
Loss on same	4,336,007.96	
		6,063,992.04
Government bonds	27,236,512.00	
Loss on same	91,348.72	
		27,145,163.28
Income bonds	9,355,000.00	
Loss on same	2,818,400.00	
		6,536,600.00
	Total	$63,463,764.09
	Cost of road	60,467,641.27
Excess of receipts from bonds over cost of road		$2,993,122.82

There must be added to this sum, in order to get the cash profit on building the road, the amount which was paid to the Union Pacific by the Central Pacific for the section of road lying between Promontory, which had been settled upon as the meeting place of the two roads, and the point which is now the end of the Union Pacific, some four or five miles west of Ogden. For this transfer of the ownership of some fifty miles of road the Union Pacific received the sum of $2,698,620. This makes the cash profit on the enterprise $5,691,742.82.

Then, in order to ascertain the total profit on construction, there must be added the value of the whole amount of stock issued. But what that value is, cannot be said. The leading men of the enterprise seemed unanimous in the opinion that a fair valuation was 30. But Union Pacific stock had certainly been above that point repeatedly, and it was down at one time to 9. It has always been a speculative stock, the sales amounting in a year to several times the total amount outstanding. But, for the sake of getting an estimate of the profits made by the builders of the Union Pacific, even though that estimate be

admittedly unreliable, the valuation given above may be taken. At 30, the $36,762,300 of stock would be worth $11,028,690. Adding this to the cash profit as stated above, the total profit appears to be $16,710,432.82, or slightly above 27½ per cent. of the cost of the road.

In the fourth and fifth decades of the century what railway construction there was, was carried on by funds furnished by stock subscriptions. Then, as it became evident that bonds on unfinished roads could be sold, a new policy arose. In the fifties it was a common thing to furnish a large part of the necessary capital by the sale of bonds. There was also developed, about this time, the worse policy of building by means of construction companies. Nearly all the building of that decade was done thus, and the construction companies of the Pacific Railways were in no way unique. But, through the relation between these roads and the Government, the Credit Mobilier, the Contract and Finance Company, etc., gained broad notoriety, while the doings of many other similar corporations are never heard of.

We have now considered the first of the questions which we proposed, the motives of the Government in bidding for a railway to the Pacific, the terms which it offered, and the execution of their bargain by the railway companies. The Government offered a war-time price for a road, and got just what it bargained for.

V.

The fact that the Union Pacific and the Central Pacific furnished, for some years, the only rail route across the continent, assured them an immediate income, and a place of importance in the commercial world. As early as 1872 the president of one of the eastern roads bought a controlling interest in the Union Pacific so as to throw its traffic over his road.

In the winter of 1872–3 came the well known Credit Mobilier episode, as unjust a piece of work as the records of Congress contain. War time extravagance had been followed by a reaction. The campaign of 1872 had brought to the surface grave charges

against certain prominent politicians—charges which for lack of time could not be disproved, and so were simply denied. A virtuous and outraged public demanded the punishment of the men whom they had four or five years before—at the time when the alleged offenses were being committed—applauded to the echo. Two House committees made a searching examination of the testimony, drew up reports not borne out by the testimony, and recommended certain punitory action which was not only technically indefensible, but also extremely unjust. The country demanded that sins which were really its own be atoned for by Congressional action, Congress made two men its scapegoats, and the public settled back satisfied. Ever since that time the name of the Credit Mobilier has been a synonym for governmental corruption, and probably will long continue to be so.

Of course this Congressional action showed plainly in the price of Union Pacific stock, and the low prices that ruled may partly account for the purchases, which began in 1873, by Jay Gould.

Gould found the property in bad condition, but by giving it almost his whole time and instituting needed reforms, he succeeded in putting it on a dividend-paying basis. During the five years from 1875 to 1880, $11,942,125 were paid in dividends. In 1875 there was talk, which resulted in nothing, of consolidation with the Kansas Pacific. Between 1873 and 1878 Gould increased his holding in Union Pacific stock from 100,000 shares to double that amount, or about five-ninths of the total amount outstanding. The greater part of this, however, he sold during the next two years, thus parting with the controlling interest. In 1878 Gould began to buy Kansas Pacific stock, and before the year was out he had attempted a thorough reorganization of that property. But this he was not able to bring about until the next year.

The animosity shown in the Credit Mobilier episode had by no means disappeared. Gould's course in running the Union Pacific for the benefit of the stockholders, without making any adequate preparations to pay the debt to the Government—

simply fulfilling the legal requirements—aroused the ire of Congress, and resulted in the passage, in 1878, of the Thurman Act.

The Act of 1862 had provided that 5 per cent. of the net earnings of the road should be applied to the liquidation of the debt to the Government. Disputes over the definition of net earnings had arisen, and the Supreme Court had upheld the contention of the road. So in the Thurman Act Congress proceeded to define net earnings to suit itself. The first charter Act had also provided that the whole sum earned by the roads for transportation of Government supplies, mails, etc., should also be applied on the debt. Among the various changes made in the Act of 1864 with the intention of making easier the requirements laid on the road was a provision that one-half of this sum should be paid by the Government in cash, and the remainder offset against the debt. This was changed back to the earlier form, so as to deprive the road of any income from Government business, and the half that was previously paid in cash was now put into a sinking fund. This fund was directed to be invested in United States fives, and the interest on these reinvested in like manner, thus earning compound interest. It was further provided that the Central Pacific should pay into this sinking fund annually the sum of $1,200,000, or so much thereof as, when added to the 5 per cent. required by the Act of 1862 and to the whole sum due from the United States for services, would make 25 per cent. of the road's total net earnings.[1] The provision for payments by the Union Pacific was similar to that by the Central Pacific, except that the $1,200,000 was cut down to $850,000.

The Thurman Act was a failure in practice. There are two controlling causes for this failure: (1) the large decrease of net earnings on which the 25 per cent. was to be computed, and (2)

[1] The effect of this requirement is as follows: In very prosperous times the road would pay (1) the sum earned by services to the Government, (2) 5 per cent. of its net earnings, and (3) $1,200,000—a very considerable sum. In years when the road was not prosperous it would pay (1) its services, a reasonably constant sum, (2) 5 per cent. of a smaller sum than in the other case, and (3) if the first sum—that for services—happened to be equal to 20 per cent. of the net earnings, no part whatever of the $1,200,000. Thus we have two limits to the sum required.

the failure of the sinking-fund to earn the expected 5 per cent. compound interest. The monopoly in transcontinental traffic was broken in a few years; competition for all its traffic became exceedingly fierce; and the Thurman Act only helped to hasten the end of the period of prosperity which induced Congress to pass it. The provision for investing in United States fives was ill-advised, for these bonds bore a premium which cut the interest on the investment to barely 2 per cent. The Thurman Act was a blunder. It was framed without regard to the probable future, to meet conditions which were already passing away.

All the parties concerned in the Union Pacific, the Kansas Pacific, and the Denver Pacific wished these roads consolidated, and this would have been effected earlier than it was but for the friction which arose over the relative values of the various properties. Gould held that the Kansas Pacific stock was worth as much as the Union Pacific stock, share for share.[1]

This all looked reasonable enough, but the Union Pacific party stood fast. Finally Gould began a series of maneuvers which quickly brought them to terms. November 7, 1879, he bought

[1] He assigned the following reasons: The Kansas Pacific is much less heavily capitalized than the Union Pacific, and so has lighter fixed charges; it runs fifty miles farther east, and so has a longer stretch of agricultural country to draw from; it lies 2,000 feet lower than the Union Pacific, and so is in less danger from snows; its land grant is more valuable; its terminals at both Kansas City and at Denver are very valuable. On the other hand, the Union Pacific people pointed to the following figures:

	Mileage.	Average Annual		
		Net Earnings.	Earnings per mile.	Interest per mile.
Union Pacific (for 10 years)	1039	$5,835,713.37	$5,616.66	$3,185.39
Kansas Pacific (for 8 years)	673	1,077,988,45	1,601.77	2,294.71
Denver Pacific (for 10 years)	106	141,266.42	1,332.70	1,749.89

Gould was able to retort that under his management the Kansas Pacific had recently been put on a much better basis physically, that its country was rapidly filling with settlers, and that the southern property would soon outstrip the northern in earning capacity.

the Central Branch and some minor properties in its vicinity. November 13, six days later, he bought the Missouri Pacific, running from St. Louis to Kansas City, and let it be known that he had in mind the extension of his system to Ogden, by doing which he would have, *via* the Central Pacific, the shortest line across the continent. There was panic in the Union Pacific camp. Numerous consultations ensued, and finally the original terms of consolidation which Gould had offered were acceded to. The episode then culminated in the consolidation agreement of January 14, 1880.[1]

Previous to the time when Jay Gould bought an interest in the Kansas Pacific, that road and the Union Pacific had been at war, a condition of things harmful to both properties. This had of course ceased prior to consolidation, and the prosperity which came with peace continued after the consolidation. The effect of Gould's policy is evident from the list of stockholders at that time. Instead of a few large holders there was a large number of small ones The speculator had been replaced by the investor as soon as dividends were paid.

About the year 1883 began the competition for the traffic of the far West, and Gould foresaw the future building of roads and their inevitable effect on the Union Pacific property. While allowing a large floating debt to accumulate he kept on paying dividends, and quietly unloaded his stock in small parcels all over the country.

[1] The relations of the properties are shown in the following figures:

	Mileage	Capital Stock	Funded Debt
Union Pacific	1042	$36,762,300	$ 78,508,350.65
Kansas Pacific	675	10,000,000	30,567,282.78
Denver Pacific	106	4,000,000	581,000.00
	1823	$50,762,300	$109,656,633.43
Lines owned or interested in	1597		

The new company into which these three were merged was styled the Union Pacific *Railway* Company to distinguish it from the old Union Pacific *Railroad* Company. The capital stock was made equal to the sum of the capital stocks of the constituent companies, $50,762,300, and the new stock was issued dollar for dollar of the old.

In 1884, the ownership of the road having changed, Charles Francis Adams came to the presidency. No more dividends were paid, a conservative policy was adopted, and a hard struggle was made to check the road in its descent. Floating debts continued to pile up, however, and more money was needed. There was no one willing to furnish it except Gould, and in 1890 a second Gould régime began. With the rates at the low level to which competition has brought them, the natural result of a bad season came, and October 13, 1893, the Union Pacific went into the hands of receivers.

The Central Pacific, which Congress planned should be operated in close connection with the Union Pacific system, has found that its interests lead it in quite another direction. The men of the Central Pacific became interested in the Southern Pacific, and any traffic in which time is not an important element is sent over that route. Thus the transcontinental traffic of the Union Pacific has for years been insignificant.

VI.

When there began to be competition for the trans-Missouri traffic it became evident that the Union Pacific must have a system of branches, to act as feeders and to forestall, as far as possible, the extension of competing lines. During the prosperous years before the consolidation of 1880, when the road was earning 12 or 14 per cent. above operating expenses and fixed charges, the practice was adopted of putting one half of that sum into branch roads. After 1880 the policy was still further developed, and when Gould gave place to Adams the extension of the system still went on. The fact that Gould and Adams, two very different types of railway manager, were in complete accord on this point, goes to show that the policy was a sound one. It has, nevertheless, been charged that this was simply a trick for diverting to other uses funds which should have gone into the United States Treasury. But to pursue any other policy would have been suicide, just as much as it is suicide for a human being to deprive his body of nourishment. As will appear when a

scheme for reorganization is adopted, it was far better to allow the owners of the road to invest their profits in the property, looking to the future for a return, than that five per cent. of those profits should, under the Act of 1862 be applied toward canceling the debt. The Union Pacific system therefore grew from 2,766 miles in 1880 (only 35 per cent. of it being branches) to 7,674 in 1892 (when the branches constituted 77 per cent. of the whole). It is to be borne in mind that the present lien of the Government is a second mortgage on only 1,432 miles of this road, and that in this portion is not contained the valuable terminals. The development of the terminal cities made new locations a business necessity to the roads, and they were built without Government aid. This has given rise to the unjust charge that the road was preparing to surrender the property covered by the mortgage and parallel it with new tracks at the present low prices for railway construction. Notwithstanding the ease and profit with which this could be done, there is no evidence that such procedure has ever been intended.

The gross earnings of the system have kept pace with the increasing mileage. The 25.1 million dollars of 1880 had grown to 43.1 million in 1892. But this by no means indicates great prosperity for the road. The operating expenses had meanwhile risen from 12.1 million to 28.8 million dollars ; or, expressed in the form of a ratio, from 48.36 to 66.69. Other figures, which cannot here be given in detail, show that the quality of service which the Union Pacific system has rendered, has risen, while the prices received for that better service have steadily fallen. This is not said in praise of the Union Pacific—it is merely a statement of a fact in its history, pertinent to our question how to treat the Pacific Railway debts. We stated that the extravagant methods of construction used by the Pacific Railways were the common methods of that day, not as justification, but as fact. So we call attention, in like manner, to the falling rates on the Union Pacific. Competition in the West was so fierce that rates on all roads fell prodigiously. The difference between the Union Pacific and the other roads of the region was that its heavy

handicap in the form of excessive capitalization brought it to grief when the others escaped.

It has been attempted to call attention to some of the salient facts of Pacific Railway history in such a manner as to open the way to a consideration of the question of reorganization on purely business lines. The problem is how to reorganize a railway system of a given earning capacity, loaded with excessive liabilities. The earning power we have briefly noted. The liabilities were, when the receivers took charge of the property, $299,028,873. These consist of stock to the amount of $60,868,500, and bonded indebtedness. This latter falls into three classes: primary (including $56,229,096 due to the Government), $178,138,281; secondary, $54,740,722; questionable issues, $5,281,370.

There have been various attempts to settle the Pacific Railway debts. If the Government could have been represented in the negotiations by one man, or a small body of men, some equitable bargain would undoubtedly have been struck long ago. The necessity of using the cumbersome method of concurrent action by both houses of Congress and the President on the one side, and the railway people on the other, has so far prevented settlement. Plans of settlement have been offered by both sides, and the terms upon which the reorganization will finally come are pretty well mapped out.

Everyone recognizes the necessity of separating the Pacific Railways from the Government. The experience already had with these roads might well be pointed to as evidence of the folly of governmental control of railways while public morality remains what it is. At any rate, it must be made impossible to vary the price of the Pacific Railway securities in the stock market by the introduction of a resolution or a bill into Congress. These roads must cease to be a mixture of business and politics.

As the roads cannot possibly pay their debts at maturity, the terms of settlement must be such as to induce them to give new and better security—such as, for instance, a lien on the whole property of the system, instead of on the small part now covered by it. These concessions to the road must be in the shape of

lower interest charges and extended time for payment. The annual payments to be required ought to be, not a per cent. of net earnings, but a fixed sum. The provisions now in force as to payments have been very fruitful of trouble, involving the Government in disputes with its creatures, before its own courts—a highly unsatisfactory state of affairs. The fixed payments to be required may either increase from the first to the last, decrease from first to last, or all be equal. The important point is that they be predetermined.[1]

Whenever Congress sees fit to act in this matter from purely business motives, and with a full understanding of the elements of the problem, the difficulties will disappear.

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[1] Attorney General Olney's plan, which was laid before a congressional committee last month, provides for (1) the retention of the Union Pacific organization; (2) a refunding of the debt. The details of this latter feature of the scheme are these: The present value of the debt (July 1, 1894) is to be ascertained, and bonds of the Union Pacific Railway Company received for that sum. These bonds are to bear 2 per cent. interest, and run 100 years. They are to constitute a second mortgage on the whole property of the Union Pacific system—bond-aided portions and branches, real, personal, and mixed property. Beginning with 1905, $1,650,000 annually is to be paid into a sinking fund, and default for six months is to be cause for foreclosure. The first-mortgage bonds are also to be refunded at a lower rate of interest. (3) A third mortgage is also allowed, for the purpose of keeping up the physical condition of the property and meeting such emergencies as may arise. The issue of this mortgage is limited by the provision that fixed charges must never rise above $8,500,000, which is $4,000,000 or $5,000,000 lower than at present. It is strongly to be hoped that some plan of reorganization will be adopted without delay, for at present the Union Pacific property is simply being held intact for future use by its creditors. It is not the live factor in the industrial world which it ought to be.